

What we claim is:

1. An adhesive for a disposable human waste management device:
 - said disposable human waste management device comprising a bag;
 - said bag comprising an aperture and a flange surrounding said aperture;
 - said flange comprising a wearer facing surface and a garment facing surface;
 - said wearer facing surface comprising an adhesive;
 - said adhesive having an initial peel strength (P_I) and a final peel strength (P_F) after exposure to water;
 - wherein the ratio of P_I to P_F is from 2:1 to 1:4; and,
 - wherein said adhesive has a water absorption capacity of at least 3% by weight.
2. The adhesive of Claim 1, wherein said ratio of P_I to P_F is from 2:1.25 to 2:4.
3. The adhesive of Claim 1, wherein said initial peel strength (P_I) of said adhesive ranges from 0.1N/cm to 5.0N/cm.
4. The adhesive of Claim 3, wherein said initial peel strength (P_I) of said adhesive ranges from 0.5N/cm to 3.0N/cm.
5. The adhesive of Claim 1, wherein said adhesive is a layer having a thickness C ;
 - wherein said adhesive has a viscous modulus at a temperature of 25°C ($G''_{25}(100 \text{ rad/sec})$); and,
 - wherein said viscous modulus ($G''_{25}(100 \text{ rad/sec})$) is defined by the equation:

$$G''_{25} \leq [(7.00 + C) \times 3000] \text{ Pa.}$$
6. The adhesive of Claim 5, wherein said viscous modulus ($G''_{25}(100 \text{ rad/sec})$) is defined by the equation:

$$G''_{25} \leq [(5.50 + C) \times 1700] \text{ Pa.}$$
7. The adhesive of Claim 1, wherein:
 - said adhesive has an elastic modulus at a temperature of 37°C ($G'_{37}(1 \text{ rad/sec})$), and a viscous modulus at a temperature of 37°C ($G''_{37}(1 \text{ rad/sec})$);

wherein G'_{37} (1 rad/sec) ranges from 500 Pa to 20000 Pa;

wherein G''_{37} (1 rad/sec) ranges from 100 Pa to 15000 Pa; and,

wherein the ratio G'_{37} (1 rad/sec) / G''_{37} (1 rad/sec) ranges from 1 to 30.

8. The adhesive of Claim 7, wherein:

said elastic modulus (G'_{37} (1 rad/sec)) ranges from 700 Pa to 15000 Pa; and,

wherein said viscous modulus (G''_{37} (1 rad/sec)) ranges from 100 Pa to 10000 Pa.

9. The adhesive of Claim 8, wherein:

said elastic modulus G'_{37} (1 rad/sec) ranges from 1000 Pa to 10000 Pa; and,

wherein said viscous modulus G''_{37} (1 rad/sec) ranges from 300 Pa to 5000 Pa.

10. The adhesive of Claim 1, wherein said adhesive comprises:

a polymer selected from the group consisting of acrylics, sulphonated polymers, vinyl alcohols, vinyl pyrrolidone, polyethylene oxide, and mixtures thereof; and,

a plasticizer selected from the group consisting of polyhydric alcohols, polyethylene glycols, glycerols, sorbitols, water, and combinations thereof.

11. The adhesive of Claim 10, wherein said adhesive is a hydrophilic-hydrophobic mixed phase adhesive.

12. The adhesive of Claim 11, wherein the ratio of said hydrophilic components to said hydrophobic components ranges from 5:1 to 1:5.

13. The adhesive of Claim 10, wherein the ratio of said polymer to said plasticizer ranges between 1:100 and 100:1.

14. The adhesive of Claim 13, wherein the ratio of said polymer to said plasticizer ranges between 50:1 and 1:50.

15. The adhesive of Claim 1, wherein said disposable human waste management device is a diaper.
16. The adhesive of Claim 1 wherein said bag further comprises a multi-layered structure having an outer layer.
17. The adhesive of Claim 16 wherein said outer layer is a non-woven material.
18. The adhesive of Claim 17 wherein said non-woven outer layer is treated with a hydrophobic active surface material.
19. The adhesive of Claim 1 wherein said adhesive is applied to said wearer facing surface at a basis weight from 20 g/m² to 2500 g/m².